

## REMARKS

At the outset, Applicants kindly thank the Examiner for the Telephone Interview conducted on October 30, 2007. While no formal agreement was reached at that time, Applicants have presented a new set of claims that are believed to be consistent with what was discussed during the interview in a further attempt to resolve outstanding issues associated with this case.

In the Office Action, claim 17 is rejected pursuant to 35 U.S.C. § 112, first paragraph; and claims 2-4, 6 and 7 are rejected under 35 U.S.C. § 112, second paragraph. As previously provided, claims 1-17 have been canceled without prejudice or disclaimer, and thus, the § 112 rejections should be rendered moot in view of same. Moreover, newly presented claims 18-25 are believed to satisfy the requirements pursuant to 35 U.S.C. § 112. Therefore, the § 112 rejections should be withdrawn in view of same.

In the Office Action, claims 2-4, 6-9 and 17 are rejected for alleged obviousness reasons in view of U.S. Patent No. 5,772,934 (McFadden) and U.S. Patent No. 5,522,127 (Ozaki). As previously provided, the claims at issue have been canceled without prejudice or disclaimer, and thus, this rejection should be rendered moot.

Further, Applicants have presented new claims 18-25 that are believed to be distinguished from McFadden and Ozaki, even if properly combinable. For example, the primary McFadden reference fails to disclose or suggest a gel electrolyte secondary cell having a gel electrolyte in contact with both a positive electrode and a negative electrode and further disposed therebetween as claimed. In McFadden, a porous electrode is dipped into a solid polymer electrolyte that is heated to a liquid state and contains a lithium source to allow the lithium to intercalate and impregnate the pore volume of the porous electrode to form a composite electrolyte-electrode. The electrode is removed and allowed to cool to form the final composite electrolyte-electrode product, which is then used to assemble a battery. See, McFadden, col 6, ln. 15-25. Moreover, the secondary Ozaki reference cannot be relied on solely, if at all, to remedy the deficiencies of McFadden. For at least these reasons, Applicants believe that new claims 18-25 should be considered patentable over McFadden and Ozaki.

In the Office Action, claims 2-4, 6-9 and 17 are rejected pursuant to 35 U.S.C. § 103 in view of EP0724305 ("Akashi") and Ozaki. The claims at issue have been canceled without

prejudice or disclaimer as previously discussed, and thus, the alleged obviousness rejection should be rendered moot in view of same. Further, Applicants have presented new claims 18-25 that are believed to be distinguished from Akashi and Ozaki, even if properly combinable.

Of the new claims, claim 18 is the sole independent claim and is directed to a gel electrolyte secondary cell at least including a negative electrode composed of a mesophase graphite material having a specific surface area as claimed in combination with a gel electrolyte that includes a non-aqueous solvent consistently essentially of propylene carbonate and ethylene carbonate.

In contrast, the primary Akashi reference fails to provide a negative electrode composed of mesophase graphite material as claimed. Indeed, the Patent Office even admits that Akashi "does not specifically teach the negative electrode" in the Office Action on page 6.

Further, Akashi fails to teach or suggest a negative electrode composed of mesophase graphite combined with a gel electrolyte that includes a non-aqueous solvent consisting essentially of propylene carbonate and ethylene carbonate as claimed. Again, nowhere does Akashi describe a negative electrode with mesophase graphite, let alone mesophase graphite having the specific surface characteristics as claimed. While the examples in Akashi describe a gel electrolyte including propylene carbonate, this type of gel electrolyte was merely used in combination with electrode materials made of metal, such as platinum (See, Akashi, page 4, lines 46-50) and lithium (See, Akashi, page 9, lines 39 and 40), and not a carbonaceous material, let alone mesophase graphite having the specific surface characteristics as claimed.

The Patent Office has attempted to supplement Akashi with the mesophase graphite electrode in Ozaki. Even assuming that there is sufficient motivation to substitute the Akashi electrode with mesophase graphite as described in Ozaki, nowhere do the combined teachings of Akashi and Ozaki provide sufficient guidance to combine a mesophase graphite electrode with a gel electrolyte that includes propylene carbonate, let alone in combination with the mesophase graphite based negative electrode having specific surface characteristics as claimed. Again, Akashi provides no such motivation as previously discussed. Further, Ozaki disfavors the use of propylene carbonate with a mesophase graphite electrode (See, Ozaki, column 7, lines 5-11), and moreover, teaches against a mesophase graphite material with specific surface characteristics as claimed. Indeed, Ozaki provides that the high-rate discharge characteristic and rapid-charging

characteristic are inferior if the specific surface area is less than  $1.0 \text{ m}^2/\text{g}$  (See, Ozaki, col. 6, lines 53-54).

In contrast, Applicants have demonstrated that the charging capacity properties of the gel electrolyte cell are enhanced as the specific surface area of the mesophase graphite material of the negative electrode is decreased, e.g., from  $3.6 \text{ m}^2/\text{g}$  to  $1.2 \text{ m}^2/\text{g}$  as illustrated in Table 1 of Applicants' specification on page 20. Indeed, Ozaki prefers the specific surface area to be at least  $2.5 \text{ m}^2/\text{g}$  which is more than twice as much as the upper specific surface area limit as claimed and further recognizes "inferior" properties at a specific surface area less than  $1.0 \text{ m}^2/\text{g}$ .

Again, Applicants have demonstrated that a gel electrode secondary cell can display desirable properties with a negative electrode including a mesophase graphite material having specific surface characteristics in combination with a gel electrolyte having a non-aqueous solvent that consists essentially of propylene carbonate and ethylene carbonate as claimed. Indeed, such claimed gel electrode secondary cell was disfavored in the art (See, Specification, pages 5-7) as further suggested by Ozaki as discussed above.

Based on at least these reasons, Applicants believe that cited art is distinguished from the claimed invention. Moreover, Applicants believe that the obviousness rejection is improperly based on hind-sight reconstruction to justify the alleged modification of the art in support the obviousness rejection.

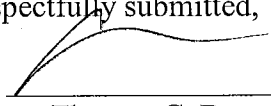
Accordingly, Applicants respectfully submit that the obviousness rejection should be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

Respectfully submitted,

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